FLOOD DEPTH MODELING IN THE NORTHWEST REGION OF BANGLADESH USING GIS

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Biographical Sketch of Author

Born in 27th December , 1978 in a family who has a passion for knowledge, wisdom and truth. Mother's name Rahima Khatun and Father's name Alauddin Ahmed. , has eight sisters of whom four are physicians , three are BSc Engineers with higher education and one is a lawyer. Author ,the youngest one, while performing BSc in civil engineering , got specially interested in Geographic Information Systems , Water Resources , Environmental Engineering and its management, and thus tried to focus on some new dimensions like using GIS in different water and environment related problems. An abstract by him is selected by ESRI for its ESRI user conference 2002 .Besides that , likes to program in JDK 1.3 , play guitar , listen to music while driving in highway.

ABSTRACT

The study intends to emphasize the role of Geographic Information Systems in presenting water resources data, here flood depth modeling is highlighted . Among many other information systems, GIS is the latest, interactive and user friendly computer based information system. In GIS the spatial nature of information allows a whole new range of possibilities including cartographic forms and visualization techniques. Presentation of the results of the retrievals and analysis using GIS therefore takes us behind the scope of the most traditional database. The study is performed for the NW region of Bangladesh . Along with GIS third generation data collection and management system MIKE 11 is used also . In this modeling , Spatial Analyst Module is used extensively. Normally when we think of a traditional database , some times it becomes too much technical for non technical people to understand . But a presentation in GIS demonstrates that , it keeps the traditional database at backhand , and it presents only the representable data asked for in format of maps, colorful figures , so it is at the same time less frightening and more understandable to non technical users, and make them aware of the issue . Data was collecetd from station gauge and presented in Arcview 3.0, Then using Mike11, a Digital Elevation Model was created . Subtracting water level data from land elevation data for different cells the flood inundation model on monthly basis was obtained . The flood inundation model can be used for several other preliminary studies such as to investigate the damage done to particular type of crops , to locate areas prone to most damage, to take & plan flood mitigation measures and a lot more. This study is a basic study, which can be used to perform many other functions also.